GLOSSARY

7-year research period - The period from 1991 to 1997 when research activities occurred on the San Juan River. For hydrology summaries, the period was 1992-1997 since no change in dam operation occurred in 1991.

Acute toxicity - A level of toxicity that results in death of the organisms being studied.

Adaptive management - Management of a given system using the most current information to continuously evaluate the planned course of action.

Aeolian - The erosion, transport, and deposition of material due to the action of the wind at or near the Earth's surface.

Aerial videography - The process of flying low over sections of river to video tape geographic features. Video tapes are subsequently digitized into GIS data systems for quantification.

Age class - A developmental or temporal delineation of a population of fish; includes age-0, age-1, age-2, etc.

Annual flow regime - The average flow of a stream as measured by the volume of water passing different cross sections over a 1-year time period.

Anthropogenic - Of, relating to, or influenced by the impact of humans on nature.

Augmentation - To increase, as to increase fish density by adding hatchery-reared fish.

Bankfull discharge - The stream discharge and corresponding stage at the incipient point of flooding. It is expressed as the momentary maximum or instantaneous peak flows rather that the mean daily discharge.

Bar - A ridge-like accumulation of sand, gravel, or other alluvial material formed in a channel, along a stream bank, or at the mouth of a stream where a decrease in velocity induces deposition.

Base release - The Navajo Dam release required to meet downstream water right demands during the runoff and summer base flow periods. The release volumes shown in Figures 8.1 and 8.2 assume a base release of 600 cfs during the runoff period. If the base release is not 600 cfs, then a volume adjustment is required to provide the correct release pattern.

Basin - Total land area draining to any point in a stream, as measured on a major aerial photo, also called catchment area, watershed, and drainage area.

Bathymetry - The measurement of the depth contours of a river bottom.

Bedload - The coarser fraction of a river's total sediment load, which is carried along the bed by sliding, rolling, and saltation.

Benthic - Of, relating to, or occurring at the bottom of a body of water.

Bioavailability - A description of the potential of a chemical or nutrient to be used or consumed by an organism.

Bioaccumulation - The accumulation of certain chemicals such as PCBs, mercury, and some pesticides in organisms which in turn are eaten by other organisms. This process can result in toxic levels of chemicals in animals.

Biomass - The amount of living matter in a given area.

Catch-per-unit-effort (CPUE) - The number of fish caught per given amount of effort (time or area); often used as an index of fish abundance.

Catch rate - The number of fish captured within a given area or time; often used as an index of fish abundance.

Cobble - Stream substrate particles between 64 and 256 mm in diameter.

Community - A well-defined assemblage of plants and/or animals that is biologically distinguishable from other such assemblages.

Competition - The general struggle for existence in which living organisms compete for a limited supply of the necessities of life.

Congener - A member of the same taxonomic genus as another plant or animal (e.g., Colorado squawfish and northern squawfish, humpback chub and roundtail chub).

Demersal - Living near, deposited on, or sinking to the bottom of a body of water (e.g., demersal fish eggs).

Depletion base condition - The river depletions considered in modeling simulations that represent all present depletions, all depletions for which Section 7 Consultations under the Endangered Species Act (ESA) have been completed, and depletions that could be reasonably be made without further federal action. Depletion base condition is the depletion level above which future development is

measured. While the depletion base condition was determined in a manner similar to the "environmental baseline" discussed in the ESA as the basis for Section 7 Consultations, the depletion base condition has not been through the approval process and is not meant to be equated with the environmental baseline.

Detritus - Loose material such as rock fragments or organic particles that results directly from disintegration, or a product of disintegration or wearing away.

Diel - Involving a 24-hour period that usually includes a day and the adjoining night (e.g., diel temperature fluctuations).

Electrofishing - A method of capturing fish in which probes are used to discharge electrical currents into an area of water, resulting in stunned, immobile fish that can scooped out of the water with nets.

Endangered - Any species that is in danger of extinction throughout all or a significant portion of its range. Such species are often protected under the federal Endangered Species Act of 1978.

Endemic - Restricted in native range to one area—for fish typically one river basin.

Fish habitat - The aquatic environment and the immediately surrounding terrestrial environment that in combination offer the necessary biological and physical support systems required by fish species during various life history stages.

Flood - Any flow that exceeds the bankfull capacity of a stream and flows out on the flood plain.

Floodplain - Any flat, or nearly flat lowland that borders a stream and is covered by its waters at flood stage.

Flow - (a) The movement of a stream of water and other mobile substances from place to place.
(b) The volume of water passing a given point per unit of time. (Synonym: Discharge)

Base flow - The portion of the stream discharge that is derived from natural storage; i.e., not a result of direct runoff. As used here, base flow refers to the portion of the hydrograph not affected by snowmelt or storm runoff.

Enhancement flow - An improvement of flow conditions that provides improvement over natural conditions for aquatic, terrestrial, and recreational resources.

Minimum flow - The lowest discharge recorded over a specified period of time.

Peak flow - The highest discharge recorded over a specified period of time. Often thought of in terms of spring snowmelt or summer, fall, or winter rainy season flow. For this report, it is the maximum average daily flow.

Flushing - The removal of fine sediments from riverine habitats; this is usually accomplished during high flow events.

Geomorphological - The physical form of the river.

Ground truthing - The process of manually checking aerial photos for errors in the field.

Habitat - The place where a population lives, feeds, and reproduces; including its surroundings, both living and nonliving.

Habitat complexity - Refers to the number of different habitat types found in a portion of river. High habitat complexity refers to an area with several habitat types or more, whereas low habitat complexity refers to an area with few habitats.

Habitat type - A terrestrial or aquatic unit, consisting of habitats have equivalent structure, function, and responses to disturbance.

Hydrograph - A graph depicting, for a given point on a stream, the discharge, stage, velocity, or other property of water with respect to time.

Hypolimnetic - Related to the lower, cooler, non-circulating water in a thermally stratified lake in the summer.

Indigenous - Naturally occurring in a particular location. When referring to fish, this has the same meaning as "native."

Inflow - The areas where a river flows into a lake or another river.

Lentic - Of, relating to, or living in still waters.

Life history study - The study of factors (such as food, environment, other organisms) that influence an organism or population during its lifetime.

Lotic - Of, relating to, or living in moving waters.

Low-velocity habitat - Habitat that can be identified by flow speeds less than that of the main channel. Low-velocity habitat includes slackwaters, shoals, eddies, pools, and backwaters.

Macrohabitat - Large hydraulic units that describe areas used by fish, e.g., eddies, runs, riffles, pools, backwaters.

Macroinvertebrate - An invertebrate (animal without a backbone) large enough to be seen by the human eye without magnification.

Main channel habitat - Habitat generally occurring in the deepest cross-sectional area of a river where current speed is highest.

Metabolites - A substance that is essential to the metabolism of a particular organism or to a particular metabolic process.

Minimum peak release - The minimum peak release referenced in the reservoir operating recommendations refers to the smallest Navajo Dam release that will be made during runoff, defined as a 1-week ramp up, 1-week peak, and 1-week ramp down. The actual total volume depends on the magnitude of the peak (e.g., 5,000 to 6,000 cfs).

Native species - A species that evolved in the system in which it was naturally found.

Near shore habitat - Habitat that occurs in areas between the main channel and the still water areas adjacent to shore.

Nonnative species - A species that did not evolve in the system in which it is currently found.

Omnivorous - Species that is not restricted in its food habits to a single type of food.

Overbank flow - The stream discharge that leaves the stream channel and flows into the floodplain.

Passive Integrated Transponder (PIT) Tag - A small, glass-encapsulated, individually numbered tag implanted in a fish's body cavity with a hypodermic needle that can be read with a PIT tag reader each time the fish is captured.

Periphyton - The growth of organisms, primarily algae and diatoms, on rocks and other surfaces in streams.

Perturbation year - A year in which the nursery habitat has been deteriorated by storm events to a level requiring flushing. In the absence of a direct observation, a perturbation year is any year in which there are more than 13 sediment event days, as defined herein, between August 1 and December 31.

Piscivory - Of or relating to fish eating.

Population - A reproducing, self-sustaining aggregation.

Post-dam period - The period between Navajo Dam's completion in 1962 and the advent of the 7-year research period. In summarizing hydrology information, the post-dam period refers to 1962 to 1991.

Pre-dam period - The period before Navajo Dam was completed in 1962. In summarizing hydrology information, the pre-dam period refers to 1929 to 1961.

Predation- The act of catching another organism and eating it after it is dead or while it is still living

Primary peak release - As referenced in the reservoir operating recommendations, primary peak release refers to the largest Navajo Dam release required during runoff, which is defined as a 4-week ramp up, 3-week peak, and 2-week ramp down. The actual total volume depends on the magnitude of the peak (e.g., 5,000 to 6,000 cfs).

Radio-tag - A battery-powered electronic device of varying size that emits a radio signal and can be surgically implanted in a fish's body cavity. Radio-tagged fish can be tracked using a variety of receivers. Radio tags typically last from 0.5 to 2.0 years, depending on battery size.

Reach - A length of stream channel that is relatively uniform with respect to geomorphic characteristics.

Recruitment - Replacement of adults within a population through growth and maturity of young individuals.

Reproductive success - The ability of a given population to produce viable offspring that can continue on to further reproduce.

Riparian - Pertaining to anything connected with, or immediately adjacent to the banks of a stream or other body of fresh water.

Roughness (Manning's n) - A measure of resistance to flow due to channel contact geometry (roughness), expressed as a coefficient used in flow equations to predict depth when slope, cross-sectional area, and discharge are known. One such equation that is used widely in water resources is the Manning equation. The Manning roughness coefficient (n) has been computed for a wide range of bed material and channel configuration for both constructed and natural channels and for floodplains.

Runoff - The portion of rainfall, melted snow or irrigation water that flows across ground surfaces and eventually is returned to streams.

Secondary channel - A channel of a river separated from the main channel by an island.

Sediment load - A general term that describes the movement of sediment by a stream, either in a suspension (suspended load) or at the bottom (bedload).

Spawning - The act of reproduction by which adult male and female fish combine egg and sperm to produce fertilized eggs.

Species - The smallest natural population of organisms permanently separated from all others by more or less complete sexual isolation.

Storm event day - A day when the daily gain in flow between Farmington, New Mexico, and Bluff, Utah, and the daily flow at Bluff, Utah, were each more than 150 cfs greater than the preceding 5-day average. (A storm event day was given a weight of 2 if the gain in flow was 3,000 cfs or more.)

Suspended load - The portion of the total sediment load that moves in suspension and is made up of particles having such a density or grain size as to permit movement disassociated from the stream bed.

Stage - The elevation of a water surface above or below and established reference or datum.

Thalweg - The line connecting the lowest or deepest points along a streambed.

Total dissolved solids (TDS) - A measure of inorganic and organic dissolved in water (able to pass through a 0.45 F filter).

Total suspended solids (TSS) - The organic and inorganic material left on a standard glass fiber filter (0.45 F filter)

Tributary - A stream feeding, joining, or flowing into a larger stream.

Water quality - A general description of the condition of a body of water described in terms of the chemical (e.g., nitrogen, phosphorous), physical (e.g., temperature, conductivity) and biological (e.g, type and abundance of vegetation) components.

Young-of-the-year (YOY) - Fish less than 1 calendar year of age.